Preliminary Draft

Early Childbearing and Schooling in Urban South Africa

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Abstract

South Africa's total fertility rate is fewer than three births per woman and declining. At the same time we find that more than 35 percent of 20-year-old girls have given birth at least once. Limited data in developing countries, particularly the lack of information on timing of events, has not allowed for properly addressing whether and how early life characteristics matter for early childbearing and schooling. We take advantage of a unique panel dataset to examine the dynamics defining early childbearing and the factors facilitating school enrollment after childbearing. The Cape Area Panel Study (CAPS) is a survey of 4,800 young people in Cape Town that also includes a calendar with extensive retrospective information. Unlike many countries, a birth does not necessarily mean South African girls permanently drop out of school. We find for example that 35% of girls who gave birth at age 15 are enrolled in school at age 16.

Introduction

South Africa's total fertility rate is fewer than three births per woman and is declining. At the same time, adolescent childbearing levels remain high: More than 35 percent of 20-year-old girls have given birth at least once. A third of these young mothers are enrolled in school the year after the birth. High rates of early childbearing combined with significant levels of subsequent school enrollment raises questions about what are the factors driving early childbearing and its consequences for successful schooling in South Africa.

Although there should be caution in assuming a negative effect of adolescent childbearing on educational outcomes (Geronimous and Hoffman 1993), early childbearing has often been found to be a barrier for subsequent successful transitions to adulthood such as school enrollment and advancement, particularly for girls. Yet, South African girls attain more education on average than boys across all racial groups (Lam and Seekings, 2005). In addition, researchers have also argued that early childbearing does not necessarily mean permanently dropping out of school or unsuccessful educational careers among South African girls (Kaufmann et al 2001; Madhavan and Thomas 2005). In this paper, we explore the idea that enrolling in school in the years subsequent to giving birth will depend on a girl's ability to negotiate parenthood and education. This in turn depends on the level of social, financial and familial support available. Although girls' experiences in their formative years shape their social capital, their values and educational aspirations, limited data in developing countries has not allowed for properly addressing these questions. We focus on school enrollment in the year subsequent to giving birth, emphasizing the role of exogenous early-life characteristics.

We take advantage of new survey data to examine the dynamics defining early childbearing and young mothers' school enrollment in urban South Africa. The Cape Area Panel Study (CAPS) is a longitudinal survey of 4,800 young people in metropolitan Cape Town. CAPS provides detailed calendar data on reproductive health, schooling, living arrangements of urban youth and expectations about school, childbearing and marriage. The major advantages are much larger samples which allow for rigorous statistical estimation techniques, as well as detailed information about youth's current and early life information. We also make use of timing of events, which allows us to identify the temporal relationships between school enrollment and childbearing in the year immediately after a first birth, something which is impossible in most cross-sectional data.

This paper contributes to the debate on girls' transitions to adulthood in three key ways. First, by providing evidence on the educational opportunities and prospects after an early birth. South Africa is one of the few African countries where students are not expelled because of pregnancy or parenthood, creating the opportunity of continuing or returning to school.
Second, by exploring the role of early life characteristics in shaping teen childbearing and school enrollment after early birth. Exogenous characteristics of family and social context in which adolescents grew up are likely related to successful transitions to adulthood, although rarely investigated in developing countries due to data limitations. Third, by focusing on South Africa, where there is scarce evidence on these issues, despite being relevant for policy. As social change proceeds, attitudes on early childbearing and educational aspirations also change.

Conceptual Background

Early childbearing is a widespread phenomenon in the developed and developing world with consequences for the future life of young adults (Singh 1998). The ramifications of teen childbearing for subsequent outcomes of mothers have been the subject of a large body of literature. They range from positive such as fulfillment of the progression to adulthood, to negative as failure to complete education, unsuccessful entry into the labor force and lower earning opportunities. Past research has emphasized the negative consequences of early childbearing although the causal relationship of early childbearing on educational outcomes remains tenuous (Geronimous and Hoffman 1993). Research in the US shows that having a baby does not predict dropping out of high school as girls who have a birth while enrolled in school are just as likely to graduate as the ones who do not (Upchurch and McCarthy 1990).

In urban South Africa, more than 35 percent of 20 - 22 year-old girls have given birth at least once. Despite these high numbers of early childbearing, South African girls attain more education on average than boys for all population groups (Lam and Seekings 2005). Differently from other African countries, girls are allowed to continue school after the birth of a child in South Africa (cite). Indeed, Kaufman and colleagues (2001) have found that many South African girls return to complete their schooling after giving birth. They find that returning to school is a function of support from the girl's family of residence, and paternal recognition of the child. A relevant variable seems to be brideprice or '*lobola'*, which increases with the girls' education. It thus provides parents with an additional incentive to support their daughter's schooling. In a recent study on rural South Africa, Madhavan and Thomas confirm that childbearing impedes school enrollment and schooling, but that young mothers can succeed in their educational careers if provided with flexible child care options (2005).

The well-being and successful educational transitions of young adults are directly affected by the social relations within which they grew up. Child rearing in sub-Saharan Africa takes place within the context of a large social unit, often the extended family structure (Caldwell 1976). Adult children move out and return and children also move as they can be are borrowed, fostered and adopted (Bledsoe 1995). As a result, children's varied living arrangements while growing up may or may not include co-residence with one of their parents (Bruce and Lloyd 1992; Lloyd and Desai 1992). Because of this fluidity on the composition of domestic groups, accounting for family characteristics while growing up is particularly relevant in African countries. Past research has suggested the importance of the presence of both parents for children's schooling in rural South Africa (Townsend et al 2002) as well as the relevance of accounting for the enormous variation within the extended family (Madhavan 2001). However, research that accounts for how early life characteristics matter for teen childbearing and subsequent school enrollment is scarce.

Past research on schooling and early childbearing in developing countries has been limited by the use of cross-sectional data and the lack of information on timing of events. Because the implications of childhood measures for transitions to adulthood can be far-reaching, we incorporate several early life characteristics in the paper. These are measures of connectedness with parents (proportion of years lived with mother and father until the age of 14), household environment (whether there was a problem with alcohol or drugs in the household while growing

up), family cultural capital (whether there was more than 5 books in the household while growing up) and academic commitment prior to birth (proportion of grades passed between ages 8 to 14).

Further data limitations have not allowed for investigating measures of timing of events nor factors measured at the time of birth. The conflict between child rearing and education is likely to be more pronounced right after birth. Moreover, the longer girls stay out of school, the more difficult it is to return. For young mothers, enrolling in school and having a successful educational career depend on the ability to negotiate parenthood and education which in turn are based on social, financial and familial support available immediately after the birth of a child. Examining school enrollment in the year subsequent to giving birth and school enrollment at some future point in time are important distinctions to consider. Therefore, school enrollment in the year subsequent to the birth is investigated here.

As social change continues its course in South Africa, the educational success of young mothers depends on a set of characteristics that should be the focus of policy initiatives. Examining the factors leading to early childbearing and facilitating young mothers' enrollment in school is even more pressing in South Africa, where early childbearing is likely to recently have become a more probable impediment to schooling as a result of rapid social change and increasing educational aspirations (Eloundou-Enyegue 2004; Mensch et al 1998). This is consistent with the findings of Garenne et al (2000), who find a bimodal distribution in age-specific fertility rates in a rural district of South Africa, one among teenagers and one for women in their late twenties.
Indeed, the effects of childbearing on school dropout have been found to be worse in contexts where educational aspirations are high as teen fertility is considered innocuous for girls' schooling in places where the duration of schooling is short or where reproductive norm prescribe early marriage and childbearing (Eloundou-Enyegue 2004b). Singh (1998) argues that in places where women may not have the opportunity to attend school, the associations between early childbearing and low levels of education may not have a causal connection.

In this paper, we explore the factors associated with enrolling in school after early childbearing, emphasizing early-life characteristics. We attempt to identify first the factors defining early childbearing in urban South Africa. We focus particularly on whether and how early-life factors correlate with early childbearing. This paper's second set of models focuses on young mother's school continuation for a successful educational career. We examine the factors that can help young mothers enrolling in school after the birth of a child.

Data and Methods

Data: The Cape Area Panel Study

This paper takes advantage of a new household survey in metropolitan Cape Town. The Cape Area Panel Study (CAPS), a collaborative project of the University of Cape Town and the

University of Michigan, is a longitudinal study of youth and their families. This paper uses the first wave of the survey, which was conducted in the second half of 2002.[1]

Wave 1 of CAPS contains two major sources of data. First, the survey includes a household questionnaire, in which demographic data on the entire household is collected. Second, the survey includes a detailed young adult questionnaire, which collects data on schooling, employment, and fertility of household members between the ages of 14 and 22. The young adult questionnaire includes a life history calendar that provides retrospective information on schooling, living arrangements, employment, fertility, and sexual partnerships. A basic numeracy and literacy skills test was also administered to each youth respondent.

CAPS was designed using a two-stage probability sample of households. Cape Town has three predominant population groups – black/African, which are about 27% of the population, coloured (about 50%), and white (about 22%). The CAPS sample oversampled African and white households in order to get large enough samples to make meaningful comparisons across groups. All households in our screener sample of about 10,000 households that contained at least one resident between the ages of 14 and 22 were selected for inclusion in the sample. Additionally, a subset of households with no 14-22 year olds were also included. Upon recruitment into the survey, the household demographic questionnaire was administered to the person most knowledgeable about the household. Full-length young adult interviews were given separately to up to three young adults in the household. The baseline wave of CAPS provides data on roughly 5,000 households and 4,750 young adults.

Overview of the CAPS sample

Table 1 shows the distribution of our young adult sample by population group. The unweighted sample has 4,752 young adult respondents drawn from 3,304 households. There are roughly equal numbers of African and coloured respondents, the result of our intentional oversampling of African areas. The weighted sample is roughly 19% white, 28% African, and 53% coloured. These numbers are within one percentage point of the population group distribution of 14-22 year-olds in the 1996 South African census for metropolitan Cape Town.[2] The mean age of the sample for all three groups is around 18. Table 2 presents the age distribution of the CAPS young adult respondents. Sample sizes are around 200 for each single year of age for the African and coloured samples, with roughly equal numbers of males and females. This allows us to make fairly precise estimates of outcomes for single year males and females for African and coloured youth. Sample sizes are smaller for whites, falling to 50 at some ages. Single year estimates will therefore be less precise for whites, although the broad patterns across ages should be reliable. The sample sizes shown in Table 2 should be kept in mind in the tables and figures presented below.

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[1] One-third of the sample was interviewed for a second time in 2003, the remaining two-thirds were interviewed for a second time in 2004, and the entire sample is being interviewed again in 2005. Details about CAPS, including questionnaires, are available at http://caps.psc.isr.umich.edu.

[2] Additional details on the design of the CAPS sample, including analysis of response rates, are presented in the CAPS technical documentation (Lam and Seekings, 2005).

Following the experience of most household surveys in South Africa, response rates in CAPS were relatively high in African and coloured areas and disappointingly low in white areas. Household level response rates were about 89% in African areas, 83% in coloured areas, and 46% in white areas, for an overall household response rate of 74%. Young adult response rates, conditional on the participation of the household, were quite high, even in white areas. Given participation of the household, response rates for the selected young adults were 93% in African areas, 88% in coloured areas, and 86% in white areas. Combining the household and young adult response rates, the proportion of potential young adult respondents who actually completed questionnaires was 83% in African areas, 72% in coloured areas, and 42% in white areas. While we think it is important to include the white results in our analysis, it is important to keep in mind that the white sample may not be representative of the population of all white young adults in Cape Town.

One focus of this paper will be comparisons of outcomes for African, coloured, and white youths. These three population groups were subject to very different treatment under apartheid, differences which may continue to affect young people in the post-apartheid period. Whites had advantages in a wide range of areas, including significantly higher expenditures on schooling, privileged access to the labor market, unrestricted residential mobility, and better access to most social services. Africans had the least access to services and the most restrictions on work and migration, with large gaps in expenditures on schooling between Africans and whites (Fiske and Ladd, 2004). The coloured population, which is heavily concentrated in Cape Town and the Western Cape province, occupied an intermediate status under apartheid, with more restrictions and fewer resources than whites, but without many of the most extreme restrictions imposed on Africans. Although the youngest of our CAPS respondents will have had little direct experience with the overt legal restrictions of apartheid, they will have been at least indirectly affected in a number of ways. First, the education, income, and occupational opportunities of their parents will have been affected by apartheid, creating large disparities in the resources available to these young people while growing up. Second, the residential and schooling patterns continue to reflect many of the same features as they did before 1994. White youths continue to live in neighborhoods with far greater access to jobs, good schools, and health care than do African youths. As we will see below, white youths begin to work at a much earlier age than African youth, a pattern that we believe may have a large impact on later disparities in labor market outcomes.

Analytical Sample

Since we are interested in births and enrollment, we restricted our attention to females in the sample. Of the total sample of young adults, 2797 are female. Of these, 1218 are African, 1064 are coloured, 312 are white, and the remaining 14 are Indian or 'other'. Thus, 46.7% are African, 40.8% are coloured and 11.96% are white. Table 4 provides descriptive statistics of our analytical sample.

The mean age of girls is about 18 years. Most of them have grown up in urban areas. For the most part, their parents are poorly educated. Mean years of schooling were kept low amongst people of color in South Africa, which is reflected by the fact that the mean level of education of mothers barely exceeds that of primary school, while that of fathers is even lower. Mean number of siblings is 2.29. Of interest is that 37% of girls do not know their father's education. This probably reflects the different probabilities of living with their mothers relative to their fathers. Most girls have

books available in their households, and a large majority passed each year during their primary school years. At the same time, 18% grew up in a household where someone abused alcohol, and 7% grew up in households where someone had a drug problem.

For the remainder of this paper, we focus only on African and coloured girls. We do so for two reasons. First, they clearly constitute the majority of the population in Cape Town, comprising 87.5% of the total of young females. Second, only 2 of the 311 white girls in the sample have ever given birth. In contrast, 190 African and 184 coloured girls have given birth, which corresponds to 15.6% and 17.3% respectively. Of African and coloured girls aged 19, 19.0% and 25.7 % had already had a first birth. It is thus clear that early childbearing is prominent amongst non-white communities in urban South Africa.

Methods

Our paper makes use of exceptionally rich new data to further our understanding of the inter-relationship between household supports structures, teen pregnancy and schooling. The major advantages are much larger samples which allow for rigorous statistical estimation techniques, as well as detailed information about youth's current and early life environments. We also make use of event history data, which allows us to identify the temporal relationships between schooling enrollment and childbearing, something which is impossible in most cross-sectional data.

We first make use of the life events calendar data to observe the cumulative proportion of girls that have had a child as they age. We also look at the proportion of girls that are enrolled in an educational institution for each age. This provides a 'big picture' of the magnitude and prevalence of these events, and how they change through the life cycle. We then compare the enrolment rates of different groups of girls conditional on the age of their first birth. The comparison group is girls who are at least 20 years old and have never had a birth. This is possible because the life history calendar allows us to exactly identify the sequencing with which various transitions to adulthood occurred.

We then use multivariate regression analysis to inform two questions. We first ask how early life characteristics affect the probability of a birth, i.e., what factors affect the probability of early childbearing. We then investigate which factors, conditional on a birth, correlate with the probability of being enrolled in school in the year after the birth. In both cases we make use of logit regressions, weight the observations using the sample weights, and report the coefficient estimates as odds ratios. For the second regression, we restrict our sample to girls who had a birth and who had not finished school in the year of the birth. This is done to exclude girls who had already graduated from school, and thus have a significantly reduced incentive to return for subsequent schooling.

One issue of concern is that our standard errors may be incorrect due to potential non-independence of observations from the same household. CAPS interviewed all young adults in households if there were three or fewer household members aged 14 to 22 inclusive. If there were more than three, three were selected at random. To address the non-independence of observations within families, we estimated robust standard errors while clustering at the household level. This allows for correlation of the error term at the household level in our likelihood function, which

should mitigate against getting biased standard errors. We believe that this is preferable to the alternative of randomly selecting one observation from each household, as it is more statistically efficient, an issue of particular relevance when our dataset is fairly small.

Results

Descriptive Results

Figure 1 shows the mean cumulative birth rate by age, for each race group. It plots, on the same axis, the rates of schooling enrollment. From age 15 onwards, we observe that Coloured and African girls are more likely to drop out of school regardless of childbearing status. At the same ages, some of them start to experience their first births. These two series suggest that there may well be a negative relationship between early child-bearing and school enrollment. Coloured females, who experience the highest fertility rates, are also most likely to not be enrolled in school. African females fall in between Coloured and White females on both measures, for the most part. The magnitude of these trends is also relevant. Since 20% of African, and 25% of Coloured females have a 1st birth by age 19, the effects of teen fertility may affect the educational outcomes of up to 1 in 5 African and 1 in 4 Coloured females.

Figures 2 and 3 below show the mean enrolment rates for groups of girls through their life-cycle, by the age of their first birth. The group line corresponding to the 'no births' category include only African or Coloured respondents who were aged 20 – 22 at the time of the survey. This was done as we could not be certain that a 15 year old who had not yet had a birth when the survey was conducted, would reach age 20 without having had a birth.

The graphs are truly remarkable. While our data is somewhat limited, since we only observe the calendar year in which the birth occurred, it is very clear that there is a precipitous drop in enrollment rates between the year preceding the birth, and the year after the birth. Almost all girls are enrolled up to age 13. It is also noticeable that a small proportion of the girls who subsequently became teen mothers had, in fact, already left school prior to the birth. While we need to be cautious in terms of the causal claims that we make, we can certainly claim that a huge proportion of girls who were enrolled in school prior to falling pregnant, do not return or remain in school subsequent to the birth.

At the same time, a non-trivial proportion either does not drop out, or leaves and then returns to school. Fully 35% of girls who have a child before completing high school were enrolled in school in the year after the birth. What factors seem important for this difference in responses is the focus of our second regression analysis.

Table 5 provides some summary statistics on the samples we use. From these numbers, it seems that some early life characteristics matter for both childbearing, while others do not. Mother's education and presence seems to matter a lot more. Poorer socio-economic characteristics such as alcohol abuse and drug problems also seem to correlate with early childbearing, while a girls earlier experiences in school seem to predict both whether a teen will have a child, and whether she will continue her schooling.

Early Childbearing

Assuming that teen fertility inhibits educational attainment, policy makers have two mechanisms in which they can reduce these effects. First, they can reduce the probability of early childbearing. Second, they can try to encourage young mothers to return to school.

A first step in reducing the prevalence of teenage fertility is to understand the household and environmental characteristics that correlate with it. We thus regress the outcome of a teenage birth on various early life characteristics. For girls aged 19 – 22 at the time of the survey, the dependent variable has a value of 1 if a girl had a birth by age 19, and is zero otherwise. For girls less than 19 years old, the variable takes a value of 1 if the girl had a birth, and zero otherwise. The model is a logit model with coefficients reported as odds ratios. Results are reported in Table 6.

Age and age-squared are clearly significant, with older girls being more likely to have had a birth. Since this is a youth survey, this is to be expected. African girls are less likely to have a birth, although the coefficient is only marginally significant. Mother's education also is significant. A one unit increase in a girls' mother's education reduces the chance of a birth by 0.09. Somewhat surprisingly, a father's educational attainment does not seem to matter significantly to the chances of a teenage birth. Neither does the proportion of their childhood spent with either parent. What does seem to matter are household characteristics, such as whether the household had a member with a drug problem when the respondent was growing up, with an estimated coefficient of 2.26. [3]

We also included the response to a question on whether the household has at least five books which reflects household cultural capital. We interpret this as a proxy for the household's preference for education, albeit a crude one. Girls who live in such households are 33% less likely to fall pregnant, which suggests that family context may be very important in determining both adolescent fertility and educational attainment.

Finally, we include a dummy variable that equals 1 if the girl passed 90% of her years at school from ages 8 to 14 (inclusive). This we interpret as a measure of the educational potential of the girl. This variable has an odds ratio of 0.1, which suggests that 'better' students are much less likely to fall pregnant. While just suggestive, this implies that a fair number of the teenage pregnancies occur amongst girls who would not have done well at school anyway. If this is true, then teenage fertility may not be too detrimental to educational attainment after all.

In sum, we find that some early life characteristics do correlate with the probability of a birth. Better students, mother's education, household preferences for education, and alcohol and drug abuse in the household, all correlate with the chances of a birth in the directions intuitively expected.

Having a Second Chance? School Enrollment after Childbearing

[3] The `drinker' coefficient is also positive, but not significant. If we exclude the `drugs' variable, it increases and become significant.

We next utilize the data from the calendar to identify which girls are the ones that continue to be enrolled, conditional on having a birth before completion of high school. Here, the racial differences are pronounced. Results are shown in Table 7. African girls are four times more likely to continue schooling immediately after a birth. Older girls are less likely to remain in school, presumably because they have better alternative employment prospects, or they have already attained their optimal level of education.

Again, we find that the coefficient on the proportion of grades passed from ages 8 – 14 is greater than 1, large and significant. This would make sense for a rational decision maker choosing to make a costly investment of time and effort into the acquisition of human capital. The largest coefficient by far is the one on whether the girl lived with her paternal grandparents, when the first birth occurred. If a serious difficulty for young mothers is to find affordable child care while she goes to school, then grandparents can provide this assistance, particularly if they live in the same household. While the standard errors are large, the coefficient remains significant at any reasonable level. If we accept this explanation, then the state subsidization of childcare facilities would assist these mothers' in continuing with their educational careers.

Conclusions and Discussion

The issues of adolescent childbearing and young mothers' educational attainment have received attention in developed and developing countries, however with few studies in Africa. It is generally accepted in the literature that early childbearing prevents girls from successful educational transitions. However, the important question of providing girls with a "second chance" after giving birth has received less attention. Fewer studies have considered how early life characteristics, exogenous factors, are associated with early childbearing and subsequent school enrollment.

We find that girls can succeed in educational careers subsequent to the birth of a child. Findings from our paper show that a significant proportion of young mothers enroll in school in the year subsequent to giving birth. We find that living with mothers or paternal grandparents substantially increase the chance of enrolling in school right after birth. We interpret this as availability of child care in the household, which suggests that policy interventions on providing affordable day care can be very effective in creating the conditions for young mother to succeed in schooling.

Generally the weaker students are the ones who fall pregnant. Not only that, among the ones who have an early birth, weaker students are the less likely to enroll in school. It is possible that improving school performance by means of educational interventions could be an effective way of preventing early childbearing, as well as maintaining the enrollment of young mothers.

Tables

Table 1. Composition of Cape Area Panel Study Wave 1 young adult sample

Population Group	Number of households	Number of young adults	Unweighted percent	Weighted percent	Percent female	Mean age
Black/African	1,442	2,151	45.3	28.2	55.8	18.1
Coloured	1,412	2,002	42.1	53.1	50.9	17.8
White	450	599	12.6	18.7	51.7	17.9
Total	3,304	4,752	100	100	52.4	17.9

Table 2. Age distribution of CAPS Wave 1 young adult respondents, 2002

	African		Coloured		White		Total	
Age	N	%	N	%	N	%	N	%
14	207	9.6	215	10.7	69	11.5	491	10.3
15	218	10.1	246	12.3	80	13.4	544	11.4
16	241	11.2	256	12.8	62	10.4	559	11.8
17	236	11.0	282	14.1	81	13.5	599	12.6
18	261	12.1	248	12.4	73	12.2	582	12.2
19	290	13.5	211	10.5	69	11.5	570	12.0
20	249	11.6	202	10.1	50	8.3	501	10.5
21	222	10.3	191	9.5	62	10.4	475	10.0
22	227	10.6	151	7.5	53	8.8	431	9.1
Total	2,151	100	2,002	100	599	100	4,752	100

Table 3. Sexual activity and pregnancy experience of CAPS respondents, 2002

	Percentage who had sex						Percentage with pregnancy					
	African		Coloured		White		African		Coloured		White	
Age	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
14	3.0	13.3	1.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	27.4	20.4	2.8	7.6	0.0	6.7	0.9	0.0	0.6	0.7	0.0	0.0
16	32.3	48.8	13.4	14.9	2.4	2.2	4.6	1.3	5.7	0.0	0.0	0.0
17	52.5	50.2	16.4	31.5	25.1	5.3	10.1	2.7	9.2	3.4	4.5	0.0
18	68.4	66.2	28.2	49.0	15.2	27.9	15.5	1.1	16.1	8.1	0.0	0.0
19	81.9	80.1	46.5	54.4	51.2	35.0	24.9	5.4	27.0	7.3	4.1	0.0
20	91.4	81.1	57.4	59.5	57.1	68.1	25.3	10.2	37.0	9.7	16.9	0.0
21	85.7	89.2	66.4	62.4	73.4	64.9	35.6	13.1	44.6	25.4	3.3	0.0
22	93.3	87.7	74.9	73.6	56.1	74.6	46.2	20.6	53.3	23.2	0.0	3.4
Total	61.8	60.9	31.9	37.5	31.3	28.4	18.5	6.0	19.9	7.5	3.0	0.2

Table 4: Summary Statistics of Analytical Sample

	[N]	Mean/Proportion	Std. Dev.
Age		17.95	2.47
African		44%	0.50
Lived mostly in urban area while Growing Up		71%	0.45
Mother's education	2797	7.43	4.09
Mother's education missing	2797	0.13	0.34
Father's education	2797	5.49	5.04
Father's education missing	2797	0.37	0.48
Number of Siblings	2602	2.29	3.19
Drinker in HH while growing up	2797	18%	0.38
Drugs in HH while growing up	2797	7%	0.25
Household has >= 5 books	2797	78%	0.41
Proportion of grades passed aged 8-14	2602	0.95	0.09

Sample: Females (all races) in CAPS 2001

Table 5. Selected Characteristics by Childbearing: African and Coloured Females, 14-22

	Ever Had a Birth		Enrolled in year after	
Demographic Variables	**Yes**	**No**	**Yes**	**No**
Race: African	15.6	84.4	36.67	63.33
Race: Coloured	17.29	82.71	11.24	88.76
Age				
14	0	100	63.64	36.36
15	0.82	99.18	36.84	63.16
16	3.07	96.93	26.47	73.53
17	8.27	91.73	29.51	70.49
18	12.04	87.96	15	85
19	21.89	78.11	14.58	85.42
20	27.42	72.58	3.03	96.97
Spent most life in Rural Area	79.34	20.66	68.52	31.48
Parents' Variables				
Mother's Education				
Less than high school	83.02	16.98	24.55	75.45
High School	91.89	8.11	33.33	66.67
Greater than high school	91.95	8.05	60	40
Missing/Unknown	79.21	20.79	18.18	81.82
Father's Education				
Less than high school	84.66	15.34	24.1	75.9
High School	90.42	9.58	7.69	92.31
Greater than high school	95.4	4.6	50	50
Missing/Unknown	79.75	20.25	25.3	74.7
Early-Life Characteristics (mean, by birth)				
Drinker in HH while growing up	24.4	18.08	22.35	23.48
Drugs in HH while growing up	10.08	6.67	7.06	10.98
Proportion of Years lived with father (up to 14)	0.55	0.61	0.45	0.58
Proportion of Years lived with mother (up to 14)	0.85	0.86	0.83	0.85
Living with Mother at First Birth		n/a	0.86	0.73
Living with Father at First Birth		n/a	0.32	0.39
Living with Maternal Grandparents at First Birth		n/a	0.07	0.09
Living with Maternal Grandparents at First Birth		n/a	0.01	0.05
Books	0.86	0.8	0.61	0.67
Age at First Birth	17.23	n/a	16.08	17.6
Education Characteristics				
Proportion of Years passed in ages 8 – 14				
Less than 90%	77.43	22.57	18.25	81.75
More than 90%	86.17	13.83	28.3	71.7

Source: Cape Area Panel Study, 2001

Table 6: Odds-Ratios of Logit Regression of Childbearing: African and Coloured South Africans

	Odds ratio	Std. error
Demographic Characteristics		
Age	113.20***	83.69
Age squared	0.89***	0.02
Race (Coloured=omitted)	0.75*	0.13
Lived mostly in urban area while growing up	0.87	0.16
Number of Siblings	1.01	0.02
Parents' SES and Cultural Capital		
Mother's education	0.91***	0.03
Mother's education missing	0.43***	0.13
Father's education	0.98	0.03
Father's education missing	1.48	0.45
Household has >= 5 books	0.67***	0.12
Early-life Characteristics		
Proportion of years lived with father until age 14	1.23	0.24
Proportion of years lived with mother until age 14	0.94	0.26
Drinker in Household while growing up	1.22	0.24
Drugs in Household while growing up	2.26***	0.56
Proportion of grades passed aged 8-14 (>90%)	0.10***	0.07
[N]	2278	
Pseudo R Squared	0.1895	
Log-likelihood	-729.39	

Notes: Significance: * 10% level, ** 5% level, *** 1% level

Standard Errors Clustered at the Household Level

Table 7: Odds Ratio of Logit Regression of School Enrollment in Year after Birth: African and Coloured South Africans

	Odds Ratio	Std. Err
Demographic Characteristics		
Race (Coloured=omitted)	4.03***	1.85
Lived mostly in urban area while growing up	1.64	0.68
Age at First Birth	0.62***	0.06
Parents' SES		
Mother's Education	0.99	0.07
Mother's education missing	0.48	0.38
Father's Education	0.94	0.09
Father's education missing	0.73	0.61
Household Composition at First Birth		
Lived with Mother at First birth	2.26*	1.05
Lived with Father at First birth	0.58	0.26
Lived with Maternal Grandparent(s) at First birth	0.86	0.37
Lived with Paternal Grandparent(s) at First birth	12.29***	11.17
Early-life Characteristics		
Proportion of grades passed aged 8-14 (>90%)	2.66***	0.95
[N]	310	
Pseudo R Squared	0.2274	
Log-Likelihood	-122.93292	

Notes: Significance: * 10% level, ** 5% level, *** 1% level
Standard Errors Clustered at the Household Level

Figure 1

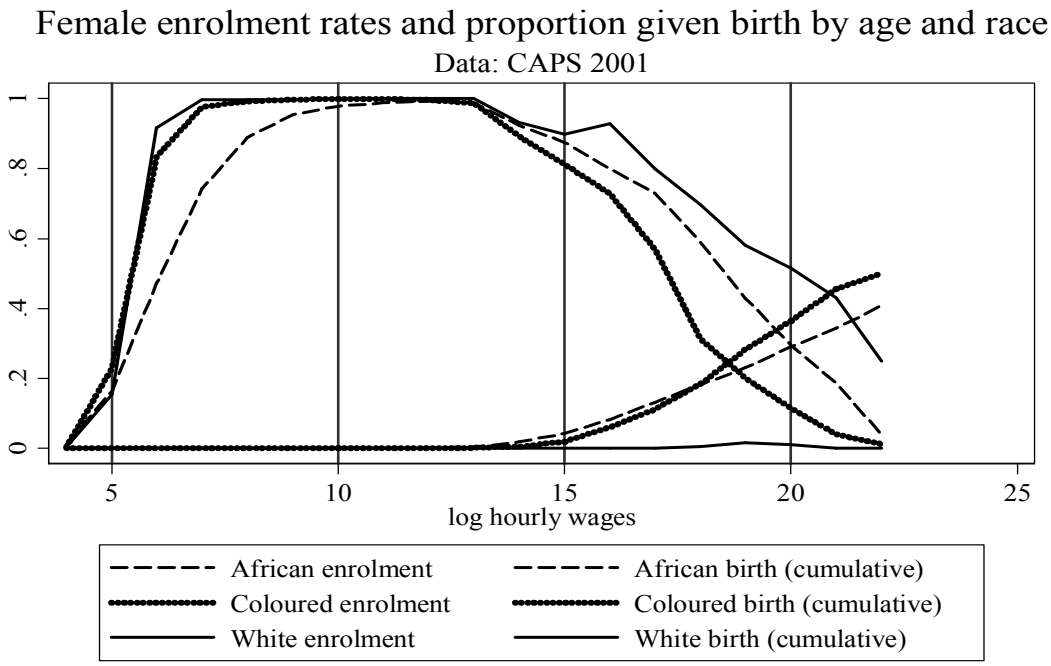
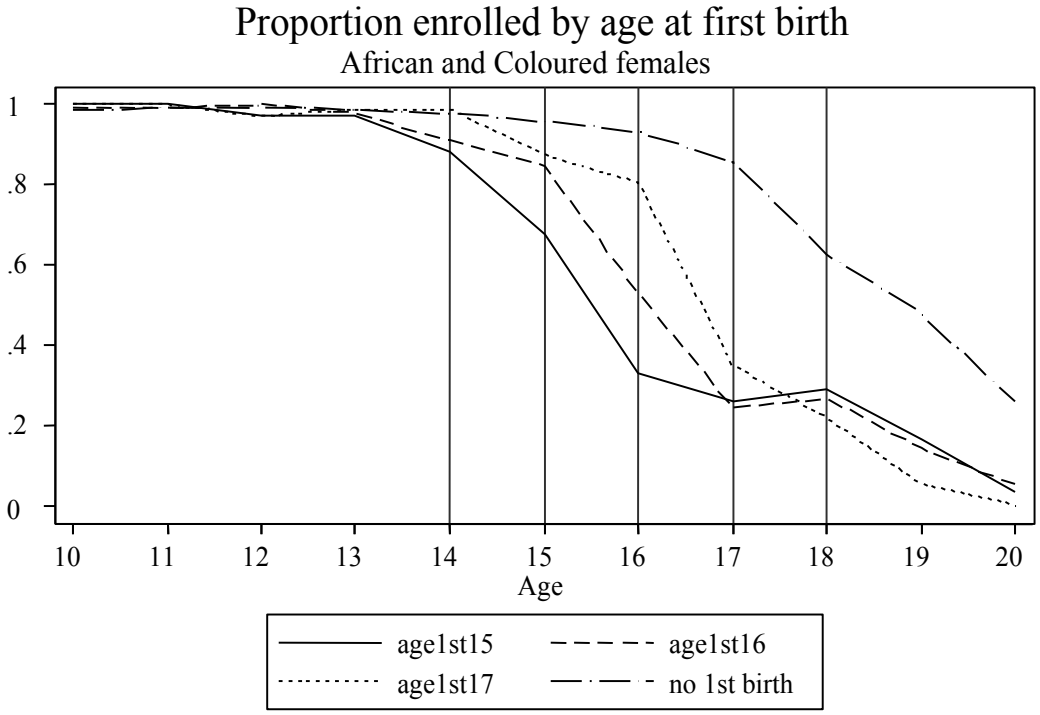
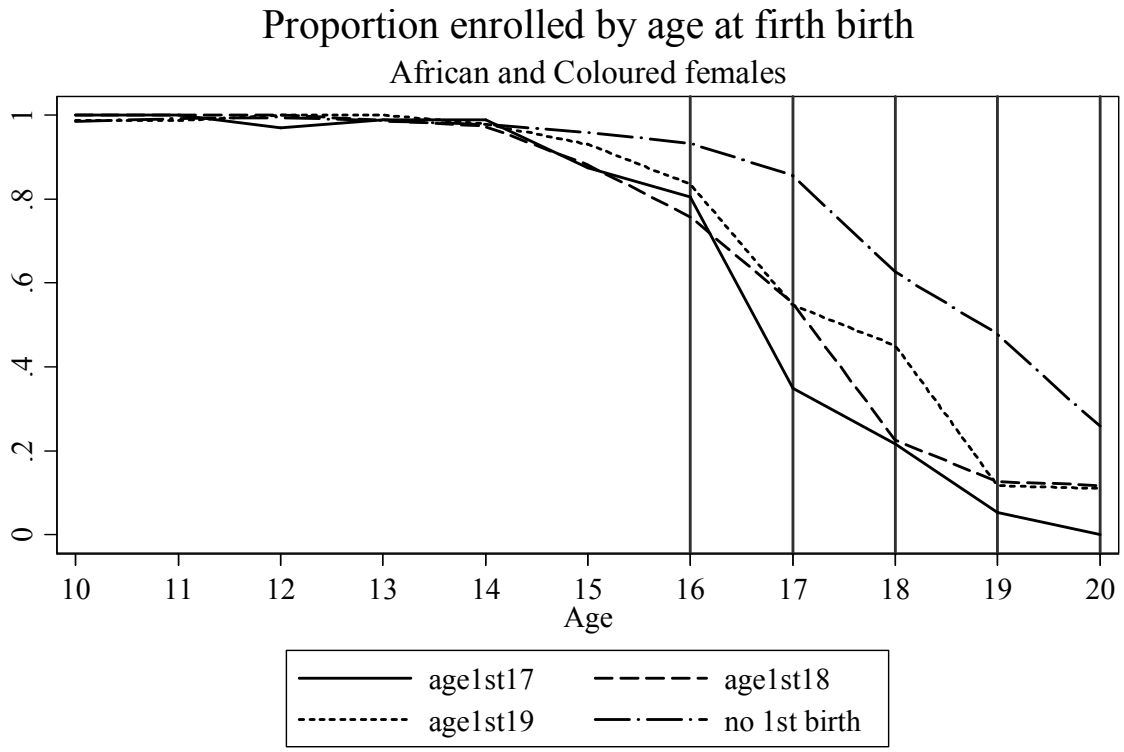


Figure 2



Data Source: CAPS 2001

Figure 3



Data Source: CAPS 2001

References

Anderson, Kermyt G., Anne Case, and David Lam (2001) "Causes and Consequences of Schooling Outcomes in South Africa: Evidence from Survey Data," *Social Dynamics* 27(1): 1-23.

Bledsoe C. and B. Cohen. Social Dynamics of adolescent fertility in sub-Saharan Africa.

Case, Anne, and Angus Deaton (1999) "School inputs and educational outcomes in South Africa," *Quarterly Journal of Economics* 114: 1047-1084.

Fiske, Edward B. and Helen F. Ladd (2004) Elusive Equity: Education Reform in Post-Apartheid South Africa, Brookings Institution Press, Washington.

Fuller, B. and Liang (1999) Which Girls Stay in School? The Influence of Family Economy,

Garenne M, Tollman S and Kahn K. 2000. "Premarital Fertility in Rural South Africa: A Challenge to Existing Population Policy", Studies in Family Planning, 31(1), Mar.

Fuller, Singer, and Keiley (1995) Why Do Girls Leave School in Southern Africa? Family Economy and Mothers' Commitments. *Social Forces*, 74:657-680.

Fuller, B. and X. Liang . "*Which Girls Stay in School? The Influence of Family Economy, Social Demands and Ethnicity in South Africa*." In *Critical Perspectives on Schooling and Feritlity in the Developing World*, edited by C. Bledsoe, J, Casterline, J. Johnson-Kuhn and J. Haaga. . Washington DC: National Academy of Sciences Press.

Kaufman C. and de Wet T, Stadler "Adolescent Pregnancy and Parenthood in South Africa", J, Studies in Family Planning, 32(2), June 2001.

Lam and Seekings. IUSSP 2005.

Lam, David, and Jeremy Seekings (2005) "The Cape Area Panel Study: Technical Documentation for Wave 1," Centre for Social Science Research, University of Cape Town.

Lloyd, Cynthia (2005) *Growing Up Global: The Changing Transitions to Adulthood in Developing Countries.* Washington: National Academies Press.

Lloyd, Cynthia, Jere Behrman, Nelly Stromquist and Barney Cohen (2005). *The Changing Transitions to Adulthood in Developing Countries: Selected Studies.* Washington: National Academy of Sciences.

Madhovan, S. 2001. "Female Relationship and Demographic Outcomes in Sub-Saharan Africa." Sociological Forum, Vol. 16:3.

Madhovan, S. and K. Thomas. 2005. "Childbearing and Schooling: New Evidence from South Africa." Comaprative Education Review, Vol. 49: 4.

Thomas, Duncan (1994) “Like Father, Like Son, or, Like Mother, Like Daughter: Parental Education and Child Health,” *Journal of Human Resources*, 29(4): 950-988.

Thomas, Duncan (1996) “Education Across Generations in South Africa,” *American Economic Review* 86: 330-334.

Upchurch & McCarthy 1990;